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AMATEUR RADIO DIGITAL COMMUNICATIONS

May 2022

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A Note from Chelsea

Hi, everyone! As ARDC's Grant Manager, I'm thrilled to introduce you to our first cohort of new 2022 grantees!

In this first round we issued just over $1.5 million in grants. These include a STEM project that will show kids how to build a simple radio, an open-source 900 MHz transceiver for digital communications, and GNU Radio enhancements. You'll find information on these grants below and the other first round grants on our website.

We are anticipating more grant applications this year than in 2021, and as a result, there's more competition. In this first round, we could only fund about half of the 35 applications that were submitted to us. Even so, we continue to welcome applications from anyone interested in applying, and encourage you to check out the instructions page on our website to learn what makes a project likely to get funded.

Round 1 Grants: STEM, 900 MHz Digital Transceiver, GNU Radio enhancements

Science is Elementary - Jasmine and Josie Build a Radio. Science is Elementary serves over 15,000 underrepresented students annually, along with their teachers, families, and surrounding communities, in Northern California. This grant will fund publication of the book, Jasmine and José Build a Radio, targeted at seven year-olds. In this book Jasmine and José will visit a family friend who is an amateur radio operator. During their visit, the children become intrigued by the radio and build a simple one of their own. Funding for this project will allow Science is Elementary to produce 2,240 kits which will include the books, adult companions in English and Spanish, and all materials needed to complete the projects in the book. By following Jasmine and José's step-by-step illustrated instructions, children will build their own radio and learn how radio works. The kits will be distributed free of charge to students in Title I schools in

the SF Bay Area. In keeping with ARDC's open access mission, a PDF of the book and the adult companion will be available for free online.

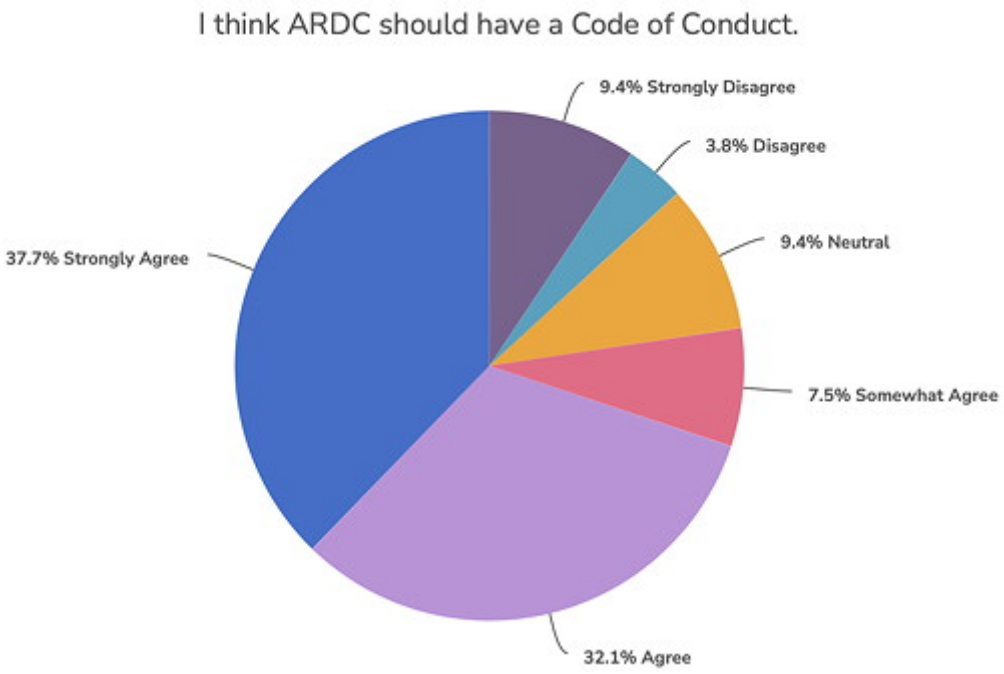
DAEmod-915: Open-Source Open-Hardware 915MHz Digital Transceiver. The goal of this project, headed by Bradley University students Peter Handler, Connor Dickey, and Philip Pierce Bradley, is to develop a digital transceiver system for the under-utilized 33 cm band. By making both the hardware and software completely open source, the students are hoping to inspire hams to experiment with digital communications techniques and operation on the 33 cm band. Project documentation is available at https://github.com/DAEMod-915/DAEMod-915.

GNU Radio Usability Enhancements. GNU Radio has identified a number of improvements to GNU Radio that will make GNU Radio easier to use, more accessible, and easier to maintain.These include the installation of GNU Radio and out-of-tree modules (OOTs), documentation, ongoing software maintenance and support, and improvements to the GNU Radio Companion (GRC). The projects were carefully chosen to extend and advance work already underway, but were hindered by lack of specialist experience. This grant from ARDC will allow GNU Radio to hire experts specialized in each area.

For more information on the grants that we made in this first round, visit our website.

Code of Conduct Survey Results are In

The results of our code of conduct survey are in, and the findings are positive. A solid majority of respondents think that having a Code of Conduct is a good idea. When asked if they agree with the statement, "I think ARDC should have a Code of Conduct," 41.1% strongly agreed, 30.4% agreed, and 7.1% agreed somewhat. Only 12.5% disagreed. In addition, nearly 80% thought that codes of conduct are an effective way to prevent misconduct and harassment.



There were 56 responses to the survey, which ended April 29, 2022. The respondents were primarily 44Net users, as well as ARDCvolunteers, ARDC staff members,and grant recipients.

To see the complete report, go to the survey website or download this PDF. Look for a draft of the Code of Conduct in the coming months.

44Net Assessment – Give Us Your Thoughts!

44Net has been around since the 1980s, allowing amateur radio operators to experiment (and more!) with internet routing, for free. The world has changed a lot since then, but technologically speaking, 44Net has remained pretty much the same. Is that OK or is it time for an upgrade? To figure this out, we are taking the time to understand how 44net is being used.

The consulting firm TwoP is spearheading this assessment. The first step is collecting information via a survey, which will poll as many existing and potential new users as possible. If you have thoughts about 44Net and its future, please share them! And feel free to send the survey to anyone you think we should hear from.

We'll also be conducting interviews and focus groups with a subset of users to get more detailed information than the survey can provide. All together, this assessment will help us to determine where and how to further develop 44Net. If you are interested in participating in the focus groups, please email contact@ardc.net.

Results from the research will, of course, be shared publicly (personal information excluded) on our website.

ARDC at Cubesat Developer's Workshop

The Cubesat Developers Workshop — held this year in San Luis Obispo, CA, from April 26 to 28 — drew about 600 attendees, including students from all over the world and NASA employees. Representing ARDC at the workshop were Chelsea Párraga, KF0FVJ; John Hays, K7VE; Phil Karn, KA9Q; and Bob McGwier, N4HY.

We met 50 or more participants, including researchers from international locations, such as Réunion Island, Japan, and Egypt. We also met folks who are working with multiple universities to provide integration and transport to space. In addition, we were able to meet and get an update from Anargyros Kriezis, a principal student researcher working on various projects funded by our Olin College grant.

In case you're wondering, a Cubesat is a small satellite that is made up of 1 - 6 cubes that are 10 cm on each side. This standard form factor makes them relatively inexpensive to launch into space and put into orbit. They are a great tool for research and teaching, and many have amateur radio payloads.

Come See Us at Hamvention

We're bringing the whole staff (as well as a few board members and volunteers!) to Dayton for Hamvention, in Xenia, OH, May 20-22, 2022. Come visit us at booth 1302 in the Maxim Building, Building 1.

John Hays, K7VE, our Outreach Manager, will be talking about the ARDC grants program during the TAPR Forum, which starts at 9:15 am Friday in Room 1. Phil Karn, KA9Q, ARDC Board president, will be part of a panel on digital modes in Room 2 at 3:30 pm on Saturday.

We would love to talk to you, but if you've ever been to Hamvention, you know what a busy time it can be. To make sure that you get to talk to one of us while we are there, please contact us at comms@ardc.net so we can set up an appointment.

Contact Us!

We want to hear from you:

- Visit our website: https://www.ampr.org
- General info: contact@ardc.net
- Information and questions about grants: giving@ardc.net
- Network44 issues: postmaster@ardc.net

Follow us on Twitter: @ardc_73.

Our Mission

The mission of Amateur Radio Digital Communications (ARDC) is to support, promote, and enhance digital communication and broader communication science and technology, to promote amateur radio, scientific research, experimentation, education, development, open access, and innovation in information and communication technology.
